241 Chinese. This method of cultivation, of course, demands more work, and the Russian clinging to his customary methods naturally struggles against it. With the beginning of collectivization the kolkhoz have employed specially constructed sowing machines which take these special conditions into account.

North of the Amur region the natural conditions for agriculture become more unfavorable. The reason for this, however, does not lie in the increasing coldness of the winter but rather above all in the shortening of the vegetation period. These regions, therefore, de-
●[242] pend on cultivated plants which ripen quickly. In this connection the Soviet Union has attained successes worthy of recognition in the development of types which ripen quickly and in the use of special methods of preparing seeding (Yarovisation). The Soviet Union has succeeded in moving significantly farther to the north the outer limits for grain cultivation.

134 The earth in Transbaykal in the areas preponderantly covered by forests belongs predominantly to the podsol type; numerous varieties of earth have been formed which sometimes approach loamy soil, sometimes sandy soil, according to the clay content. In the river valleys marshy and semi-marshy soil is widely diffused. The vegetable mold content of the podsol soil is only slight, being 2 percent to 3 percent; in marshy soil, however, it is large, being 15 to 30 percent. In the forest steppe areas and in the steppes of Transbaykal the soil is relatively rich in vegetable mold. East of the Yablonovyy Ridge typical black earth has even developed as far as the Argun. Interesting is the fact that the various slopes of the same ridge often show a different soil profile which corresponds with the plant growth. The north and northwest slope is covered with taiga, under which typical podsol soils lie, while on the east and southeast slopes, which are taken up by loose collections of birches, there is little or hardly any podsol; indeed, according to its external signs it already passes over here into the dark chernozem type. In the Amur and Ussuri country podsol and marshy soils with all their transitional forms take up the greatest part of the land. The soil of the Zeya-Bureya lowland and of the Ussuri-Khanka depression--the principal agricultural areas--consists essentially of young, fruitful alluvial deposits. The dark color of the upper layer of soil, rich in vegetable mold, misleads one into designating it as chernozem, black earth, but in reality it is semi-marshy meadow soil with thick layers of vegetable mold. In the dry spots this soils does in fact recall the black earth in its physical

241 to the cultivation of sugar beets; the area devoted to their cultivation has again increased in the Khanka Lake area. Tea is supposed to become a new product of the /Russian/ Far East. In 1950 /131/ the [242] Botanical Institute of Leningrad sent an expedition there in order to explore, by attempts at cultivation, the practical possibility of planting tea bushes.

241 433 All the reports mentioned above are only individual pictures of the agricultural film which is being run in the Far East. These pictures show the great strivings of the Soviet Union to use all its power to advance agriculture in these regions. If the grain harvest in the actual Far Eastern area had increased 150 percent in 1947 as compared with 1913 and the potato harvest had even increased 200 percent (Trud, 25 October 1947), this increase in production stands in contrast to an approximately 300 percent increase in population in the same period; accordingly even today the same problems still exist in supplying the population of this area with food, as has been described in the above chapter, since an additional population increase runs parallel to the increase in production, even though the two curves may perhaps have gotten somewhat closer since 1947. The actual Far Eastern regions (not including the Buryat Mongol ASSR and the Chita Oblast) can still be regarded even today as import areas in terms of food. Their dependence on obtaining supplies is alleviated by the increased cultivation of potatoes and soy beans, and import at present is no longer a problem since Manchuria with its agricultural surplus has been brought into the Soviet sphere.

Animal Breeding

231 433 In the livestock-breeding of the Soviet Union Transbaykal assumes a prominent position. While on the average there are 233 cattle to 1,000 persons in the Soviet republic, there are 1,367 cattle to 1,000 persons (1938/39) in the Buryat Mongol ASSR; and while there are 602 sheep and goats per 1,000 persons on the overall average in the USSR, there are here 1,786. The important livestock-breeding areas lie left [232] of the Selenga and right of the Ude. The breeding of better strains is being carried out according to plan by crossing the Mongol cattle with the Simmentaler and by crossing the native sheep with the Rambouillet-Merino. The steppe region left of the Selenga is thus the breeding ground for improved strains. The livestock here is housed for the winter in warm stalls and fed with prepared feed. The horse, which constitutes

Both types of steppes[1] have developed on chestnut-colored soil. Within these steppes salt-pans also appear. Further toward the north the soil becomes darker, its humus content becomes greater (3 percent to 5 percent), it changes into the so-called southern black earth, which has only a slight thickness and has a carbonate layer lying near it. The plant growth becomes richer, the contiguousness of the vegetation covering becomes thicker. These are pronounced grazing areas for sheep and goats. For large livestock they are still not sufficient. For such livestock only the meadow steppes can be considered; these meadow steppes often cover large areas along the rivers. To this category belong the Selenga steppes and the valleys of the Dzhida and the Uda. A similar change in the character of the steppes takes place in the direction of the individual mountain chains, with the various types of steppes surrounding the mountain ranges in Isohypsen /isohyetal?/ contours.

The principal importance of the Selenga steppes lies in livestock breeding, which is intensified by the breeding of valuable breeds. The most important regions here are the areas left of the Selenga and the already mentioned valley of the Dzhida. The old yurts of the Buryat have disappeared, and in their place small, permanent, modest wood houses have appeared which in long rows surround the kolkhoz buildings of the concentrated livestock economy. However, in the less favorable grazing areas, as in the Kundara steppe east of Kyakhta, the old Buryat life has been retained. For processing the resulting skins, a rather large leather processing plant has been erected here on the middle Chikoy under the name of Chikoyskiy Zavod. This plant also draws its raw materials from Mongolia. The cultivation of grain is more in the foreground in the other regions on the right side of the Selenga, especially on the lower courses of the Chikoy and the Khilok.

The broad steppe valley of the Uda is the second most important animal breeding area in the Buryat-Mongol ASSR, especially since here numerous Russians have been drawn into animal breeding. In the area around the upper course of the Uda, in the region of the Yeravninsk plain, which is rich in lakes, numerous Russian villages have come into being in which, in addition to slight agriculture, excellent dairy farming is pursued. The largest localities in this region are Gunda and Sosnovo-Ozerskoye.

East of the Selenga, rising from its delta, is the mountain ridge of the Ulan-Burgassy, which forms the watershed between the Uda and the Turka, which empties into Lake Baykal. This mountain range is broader than the Khamar-Daban and has a marked plateau-like surface

[1] [i.e. artemisian and meadow steppes -- Analyst]

cultivated plants also flourish with great success. Very recently new sowing and cultivation machines have been employed by the Soviet in the entire Far Eastern region, which is damp in the summer. These machines take account of all the conditions of that area. In the expansion of the cultivated areas devoted to soy beans, rice, beans, millet, etc., it has been shown that there has been more conversion to these in more recent times, following natural conditions. The noxious fungus, which prefers to attack the European types of grain, such as wheat, barley, and oats, has already been pointed out. This grain disease occurs in those damp warm regions in especially rainy years. As Arved Schultz (181) has observed, it is very characteristic

181. Schultz, A. Das Ussuri-Land /The Ussuri Country/. Königsberg, Prussia, 1932.

that the fields of the Korean and Chinese peasants are attacked less than the fields of the Russians. There must, therefore, also be some reasons for this. In addition the fight against the Fusorien, of which a total of 22 types have been determined to date, has been taken up by the Soviet.

In contrast to the little populated eastern and southern sides of Khanka Lake, the Tertiary hilly country to the west of the lake is thickly populated and is among the best agricultural regions. A railroad line, which is 127 kilometers long, leads from the Ussuri Railroad into this region and ends right on the border in Turiy Rog at the northeastern end of the lake. On the eastern side of Khanka Lake, the cultivated zone, which continues from the north without interruption, follows the Ussuri Railroad in a broad line, and with broad spurs into the valley of the Daubikhe and Ulakhe, the cultivated zone also penetrates toward the east into the mountain range. South of the lake the cultivated zone takes up the entire area from the Manchurian border to the mountain spurs of the Sikhote-Alin' and extends in an area of almost equal width via the Suyfun depression toward the south to the coast, where on the west side of the Bay of Peter the Great it extends farthest to the south in the coastal plain.

The watershed between the Ussuri and the Suyfun is flat and scarcely makes an appearance morphologically. The Suyfun itself comes from Manchuria and crosses the border almost exactly at 44° latitude. Then it turns immediately toward the south to the sea. The valley area of the river is level and is accompanied on both sides